EXHIBIT "F"

HYLAND DESIGN GROUP

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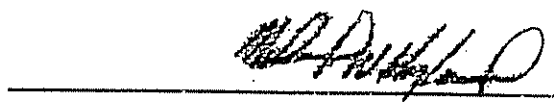
Report of Michael W. Hyland

Wall and Exterior Finish Conditions: Impacts of Water Infiltration and Resultant Issues

Catalina Cove Condominium

August 15, 2007

Prepared by:



Michael W. Hyland, P.E., R.A., L.S., P.P

Hyland Design Group, Inc

Our Project No. 5168

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Introduction & Purpose

The Catalina Cove Condominium complex is a group of six separate buildings, each building comprised of four dwelling units.

In response to our letter of November 20, 2006, in which we propose investigations of exterior wall finishes and trims, sealant joints, window openings, and other exterior conditions, the Association has authorized us to proceed with further investigation as to the extent and causes of moisture-related defects in the exterior walls of Catalina Cove. Our investigation has included the following:

Inspection of:

- Overall appearance of exterior conditions of all buildings
- Determination of wall exterior finish systems
- Invasive investigation of wall exteriors
- Evaluation of window systems
- Evaluation of integration of exterior structures to main building
- Inspection and evaluation of typical sealant joints throughout the complex

- Definition of typical defects contributing to water infiltration of the structures.
- Review of previous repair history
- Review of available plans and construction documents
- Review of applicable codes and trade standards
- Expose and document damage to the buildings in inspection areas.

The purpose of the inspections and review is to define and evaluate the existing conditions so as to enable formation of an opinion as to the cause of existing deficiencies, the means by which deficiencies may be remediated, the cost of remediation, and liability as to the causes of the defects.

Opinions expressed herein are based on the materials reviewed, the inspection findings, and my education training and experience. The opinions are held to within a reasonable degree of architectural and engineering certainty.

Materials Reviewed

Materials reviewed in the preparation of this report include the following: (References to these materials contained in text)

1. Michael W. Hyland notes of meetings with Burns Construction and Property Management

2. Michael W. Hyland letter to Bill Burns, December 6, 2006

3. Michael W. Hyland letter to Bill Burns, June 23, 2006

4. Michael W. Hyland letter to Bill Burns and James Crawford, Esq., April 4, 2006

5. Architectural Plans by Fenwick Schipper, Revision 3, dated 11/8/88, supplied by Client

6. Site Plan by Speitel Associates dated 9-28-87, supplied by Client

7. Record Plan by Pennoni Associates, Inc., dated 11/210/96, obtained from

City of Linwood Construction Office

8. Record Plan by Pennoni Associates, Inc. dated 3/7/90, obtained from City of Linwood Construction Office

9. Report/Proposal from Roger D. McLarnon, P.E. of Walker, Previti, and Holmes and Associates, November 10, 2005

10. Report from J.E. Rosenkrantz, P.E. dated August 17, 2005

11. 1987 BOCA code (pertinent sections)

12. BOCA National Plumbing Code/1987 (pertinent sections)

13. International Building Code (IBC) 2000 New Jersey Edition (pertinent sections)

14. N.J.A.C. 7:7-2.2 Regulating activities within mapped regulated wetlands

15. Terra-Hydro Engineering Group, P.A., Nolasco Intong president. Reports of August 14, 1996 (letter report, Intong to Steinberg re buildings E and F (5 & 6)) and January 18, 1998 (letter report, Intong to Steinberg Letter Report Re: Building 6)

16. Owners Correspondence Files for 2000- 2002 (may be incomplete) and part of 2003

17. Report: Hyland Design Group by Michael W. Hyland dated December 5, 2006, entitled, "Report of Inspection of Exterior Wood Siding below Water Table Trim Buildings1-6"

18. Report: Hyland Design Group by Michael W. Hyland dated August 13, 2007 entitled, "Crawl Space Conditions: Moisture, Ventilation, Flood Venting and Impacts of Site Drainage"

19 Portland Cement Association Standards for Stucco Materials and

Installation

20. American Concrete Institute Manual of Concrete Practice 2001 Version

21. EIMA (EIFS Industry Members Association) Guide to EIFS Construction
[Per Linda Widzowski, Administrative Assistant for EIMA, the organization does not retain archives of their old guidelines, as they are and always have been superseded by manufacturer's specifications. The only guidelines available from EIMA are those published in 2000 and reprinted in 2007, portions of which are referenced herein]

22. Finestone Stucco Systems (Manufacturer's Publication) Required Design Elements; Sealants, Backer Rod, Flashing

23. Dryvit Outsulation System Installation Details- current version
Per Betty Davis, Technical Service Representative for Dryvit, "It is Dryvit's policy not to disseminate outdated versions of its technical literature. Dryvit's standard specifications and details are recommendations only for the installation of the Dryvit components as of the date of publication of the documents and are presented in good faith".

24. NRCA Roofing and Waterproofing Manual, 1986 Reprinted Version

25. Andersen Windows 2006 Assembly and Installation Guide

26. EIFS Legal Network (www.stuccolaw.com) content, "EIFS Problem or Shoddy Construction"

27. New Jersey EIFS (www.njeifs.com) content "What Are the Problems with EIFS?"

28. DSP Inspections Website content (www.dspinspections.com) Excerpts from the 1999 NAHB (National Association of Home Builders) Research Center publications.

29. NAHB Research Center publication, Water Intrusion and Remediation for Wood Frame Homes with Exterior Insulation and Finish Systems (EIFS)

Description of Premises

The six buildings of the Catalina Cove Condominium complex are located along a dead-end private service street (Catalina Drive) on a developed site, which street is exclusive to the six buildings of the complex. City water and sewer service are underground in the service street. The six buildings are designated on provided Site Plan as Buildings A through F. The buildings are also referred to as Buildings 1 through 6, building A or 1 being closest to Route 9.

The six buildings of Catalina Cove can be considered in two classifications for the purposes of this report, based on the configuration and materials integrated into the exterior siding systems. Buildings A, B, and C are wood frame construction with plywood wall sheathing, which is then covered by a "Barrier"-type EIFS (Exterior Insulation Finishing System) wall siding system (EIFS with no provision for drainage of water that penetrates the surface lamina). Wood horizontal trim boards are placed at varying heights, roughly between four and six feet above grade. Below these horizontal trim boards is cedar clapboard siding with wood corners and trims.

Buildings D, E, and F are wood frame construction with plywood wall sheathing, which is then covered by a stucco wall finish. Wood horizontal trim boards are placed at varying heights, roughly between four and six feet above grade. Below these horizontal trim boards is vinyl, clapboard-style siding with appropriate vinyl channels and trims.

Exterior window and door trims (casings) are of EIFS system origin on all buildings; foam based backer panels coated with a reinforcing mesh and finish compounds. Due to the varying thickness of the two different siding systems, flashing and sealant joint details vary on the two types of buildings.

In addition to the six residential buildings of the complex, an outdoor recreational

area with pool is located between Buildings C and D. A small addition to the most westward garage of Building C serves as a pool equipment room.

Dates of Construction; Issuance of Certificates of Occupancy

While plans date from 1987 and 1988, the project construction and completion dates are seen to have extended to at least 1998. Documentation of the Dates of Issuance of Construction Permits and Certificates of Occupancy has not been made available.

Crawlspace Conditions

Prior to our inspection effort and in concert with our previous inspections of crawlspaces, we reviewed the reports of engineers Roger D. McClarnon (November 10, 2005) and John Rosencrantz (August 17, 2005) as had been previously provided to us by you. The findings of these reports as well as our own findings provided to you in our report entitled, "Crawl Space Conditions: Moisture, Ventilation, Flood Venting and Impacts of Site Drainage" dated August 13, 2007 clearly recognize varying degrees of excessive moisture conditions within the crawlspaces of all of the buildings in the complex.

Conditions cited in the above reports do not directly affect the exterior of the wall system. The environment of consistent excessive moisture in close proximity to first floor framing and wall bases has been observed, however, to contribute to unfavorable conditions within the walls, thereby contributing to the ultimate resultant effects of observed water infiltration and excessive moisture within the wall systems.

From Review of the Original Design Drawings

We have reviewed the original site plan prepared by Ed Speitel in 1987 and architectural plans prepared by Dorothea Schipper and Stephen Fenwick in 1987-1988 as provided to us by the Association.

<u>Architectural Plans</u>

As built details and conformance to provided plans for first floor and foundation/crawlspace have been reviewed and assessed in our report, "Crawl

Space Conditions: Moisture, Ventilation, Flood Venting and Impacts of Site Drainage " dated August 13, 2007. This report will exclude those elements of the facility unless they affect or are directly affected by wall conditions.

The architectural plans do not depict roof guttering anywhere on the building in the elevations, but do depict gutters on building sections 3/A-7 and 6/A-7 shown on sheet A-7.

Sheet A-7, Detail 6-A7 "TYPICAL WALL DET'L" depicts exterior wall construction as follows:

- A 2x10 Water Table trim covers the joint between CMU and 2X8 pressure treated sill and the joints where 16" open web floor trusses rest on the sill.
- A single, 2x6 wall sole plate, with 2x6 stud framing, 24 inches on center
- 6 inch R-19 Fiberglass batt insulation w/ integral vapor barrier
- ½ inch plywood sheathing with 15# building felt on the exterior, with horizontal cedar clapboard siding
- A second 2x10 horizontal trim of unspecified elevation caps the top course of cedar clapboard. (this trim piece referred to herein as, "Mid-height horizontal trim board")
- Metal "Z" flashing atop the 2x10 horizontal trim board
- Horizontal "J" bead installed atop "Z" flashing for stucco edge. The detail shows a gap between the two flashings that scales to approximately 1 inch, but no gap is specified.
- Above the "J" bead is ¾ inch cement stucco over self-furring galvanized metal lath, with 15# felt beneath the lath.
- At the approximate elevation of the second finished floor the detail depicts a 5/8 inch stucco expansion joint.
- Where the exterior wall surface meets the soffit, beneath the soffit is a "1x6 wood trim".
- Soffit is called out as "3/8" rough sawn soffit" with continuous screened soffit vent.
- Fascia is labeled, "1X wood fascia", the element scaling to the equivalent of 1x6
- "Gutter" is specified at the roof edge
- Roof edges are specified with "metal drip edge"

Inspections by Hyland Design Group, Inc

A detailed observation of the existing wall and exterior trim was undertaken. Invasive investigation was accomplished at various locations on four separate buildings. The invasive investigation sites were determined by taking into account the following:

- Previous repair history
- The two differing wall finish systems
- Previously observed repairs
- Reports by management of previous repair sites
- Observed defects in wall finish and other elements
- Observed structural details with potential for water leakage
- Observation of damage to floor framing in previous inspections
- Complaints of leakage reported by management
- Observations during these inspections

For the purposes of narration it is assumed that Route 9 is oriented North to South.

Existing Conditions Summary

Two Distinct Wall Finish Systems

As suggested by review of maintenance and repair history, it is observed that there are two distinct wall finish systems within the complex. Wall framing in all buildings is consistent with the provided plans in that it consists of 2x6, 24 inches on center, typically with ½ inch plywood sheathing.

EIFS Wall Finish

The first three buildings (Buildings A(1), B(2), and C(3)) have no felt on the exterior of the wall sheathing beneath the EIFS. These buildings have a 1 inch layer of foam attached to the plywood wall sheathing by "dabs" of adhesive, the application pattern of which varies from location to location where observed. The foam is a base portion of a "Barrier"-type EIFS (Exterior Insulation Finish System) wall cladding. Window and door casings consist of a second thickness of the

same foam base, forming a casing of between 8 and 9 inches in width. Contrary to provided plans, there is no trim board at the top of the wall beneath the soffit.

Beneath the bottom of the 2x10, mid-height horizontal trim board is cedar clapboard siding that extends down to the water table or base trim, with 15# felt installed between clapboard and sheathing.

Stucco Wall Finish

The second group of three buildings (Buildings D(4), E(5), and F(6)) have vinyl siding beneath the mid-height horizontal trim board, which consists of 1x10 installed atop 3/8 inch plywood shims. 15# building felt is installed beneath the vinyl siding, but no felt was found on the sheathing beneath the horizontal trim board. Above the mid-height horizontal trim board is a stucco wall finish that includes 15# felt against the exterior of the wall sheathing, the stucco typically being approximately ½ inch in thickness. The stucco extends up to vinyl soffit, with no wood trim board on the siding below the soffit. Vinyl siding is installed beneath the mid-height horizontal trim board, with 15# felt installed against the exterior of the wall sheathing,

Window and door casing are made in similar fashion to the first three buildings, with double layered foam coated with EIFS type finish material. However, where stucco finish is installed, the stucco extends to door and window frames, with a single layer of foam EIFS casing installed atop the stucco.

Porches and Decks

Front Entry Decks

Front entry decks are all on first floor level with framing attached to the rim joist of the floor unit. The outbound posts of these decks support porch roofs above. Where observed the attachments of these decks to floor/wall framing did not appear to be the cause of any water intrusion that could cause structural damage to the wall or floor units.

Rear Decks

Rear decks are framed of pressure treated wood with varying configurations of finish, the most common being plank decking. Several decks have a sealed finish

on plywood substrate, similar to fiberglass decking. One deck is observed to have what appears to be a corrugated, PVC or fiberglass panel ceiling.

Deck joists extend outward from the rear wall of the building. On the side of the deck closest to center, one joist is attached to the side wall. Where the decks extend outward beyond the most rearward wall of the building, there is an approximately 8 inch "return" of the deck framing to the wall surface.

Deck framing attachment varies as follows:
Buildings A, B, and C: a double 2X deck ledger appears to be attached to the outer surface of plywood sheathing. EIFS finish terminates approximately ¾ inch from the deck framing, with sealant joint installed around the perimeter of the ledger.
Building B: The more eastward, first floor deck has the previously described corrugated ceiling, which obscures a view of the majority of the deck framing.
Buildings D and F: A single deck ledger appears to be fastened with nails on top of the stucco wall finish, with no sealant joints evident. Where observed, an "L" shaped aluminum flashing is installed atop the deck ledgers and joists where they contact the building wall. *Building E:* Deck framing appears to be attached to plywood sheathing, with stucco finish applied up to the framing. No sealant joints are observed around the perimeter of the deck framing.

Doors and Windows

Doors

There are three types of doors observed:
Sliding Patio Doors- Each unit has a sliding patio door that exits onto the rear deck associated with the unit. These doors have an EIFS casing surround, and there do not appear to be any typical wall defects associated with the doors.

Swing Entry Doors- Each unit has a swing entry door on the front elevation of the building (four per building). These entry doors are well protected by overhangs or alcoves in the perimeter of the buildings, and do not appear to be associated with any wall defects.

Garage Doors- Four overhead garage doors are installed on each building. The

doors are surrounded by wood bucks, or jambs. On Buildings A, B, & C the exterior of the wood buck is trimmed with wood brickmold. EIFS finish extends up to the brickmold with a cove-type sealant joint installed between the two materials. Unless recently repaired, the majority of these door trims exhibit wood rot in the lower twelve inches of the materials.

On Buildings D, E, & F the wood buck extends outward, approximately flush with the EIFS casing. The joint between buck and casing is filled with a small amount of sealant.

Windows

Throughout the complex each building contains a similar complement of Andersen windows. Window configurations include single double hung, fixed, awning, and casement windows, factory combinations of various windows, factory combinations joined with other single units, and distributor or site assembled combinations.

Gutters & Downspouts

Gutters and downspouts were not installed as part of the original construction. Through piecemeal installation of gutter and downspout, all buildings now have a similar, but not identical configuration of roof drainage system.

At no location does gutter penetrate either stucco or EIFS wall finishes.

On the rear of Building B the installer of downspouts cut vertical slots into the horizontal EIFS trim at the second floor level. The slots were cut to allow the downspout to be installed against the field of the EIFS instead of being offset from the field. The cut slots were simply cut through the first layer of foam and EIFS finish. In no location observed was any attempt to seal or refinish the interior of the EIFS system evident. Under the observed conditions water can pass beyond the downspout and into the foam of the EIFS finish.

Irrigation System

Irrigation system control or connection boxes as well as substantial amounts of piping are located within a foot of foundation walls. An inspection of the site immediately following the shut down of the irrigation system revealed four

locations on Building A, one location each on Buildings B and C, four locations on Building D, five locations on Building E, and six locations on Building F, all of which were observed to be covered in water droplets, presumed to be deposited by irrigation system emitters. The wetted areas generally were at the level of or lower than the mid-height horizontal trim, and typically soaked areas of the walls such as inside and outside corners.

Conformance of Construction to Project Plans, Building Codes

Building Code Requirements

Based on the date of the plans, the building sub-code in effect at the time of the design and construction under the New Jersey Uniform Construction Code was presumably the BOCA National Building Code/1987, and the plumbing sub-code was presumably the BOCA National Plumbing Code/1987.

Crawlspace Conditions

In our previous report, "Crawl Space Conditions: Moisture, Ventilation, Flood Venting and Impacts of Site Drainage" dated August 13, 2007 we identified deficiencies in crawlspace elevations, site grading, roof runoff discharge, and excessive crawlspace moisture that all could contribute to the deterioration of building structure. While we will not review all of those findings herein, it is acknowledged that the observed conditions related to excessive moisture in the crawlspaces could contribute to some degradation of wall structure components.

Wall Assembly

Where revealed by invasive inspection the material, spacing, and assembly of wall structure generally conforms to the plans provided.

Stucco wall finish is in place on Buildings D, E, & F. Provided plans detail a ¾" (total cementitious thickness) stucco finish. Actual thickness of stucco finish was found to be consistently between 3/8 and ½ inch, not in conformance with provided plans.

The EIFS finish on Buildings A, B, & C does not conform to provided plans. No additional documentation nor plan revisions were provided that specify the use or

material and methods for the EIFS finish.

Gable Vents

Gable vents vary throughout the complex. Some vents are decorative only, affording no net free venting area, while other gable vents provide ventilation. Both wood and vinyl vents were observed.

Common to all buildings are triangular wood vents installed at the peak of the central gable of the main roof. These vents allow air flow from the attic areas.

Typically gable vents at both ends of the main roof are approximately 3 feet in diameter. On Buildings A, B, C, & D the vents are made of wood with a wood brickmold trim on the exterior. EIFS casing is installed tight to the wood brickmold with a small cove sealant joint. These vents are either open or blocked. The condition of these vents is poor to severely deteriorated. Main gable vents on Building F are also 3 feet in diameter with EIFS casing, but are made of vinyl or similar material and are non-venting.

Gable vents on rear gables are either wood or vinyl and are surface mounted and non-venting.

Buildings A, B, & C have a small, round gable vent on the gable of the central porch roof, which allows venting of the porch roof.

Conformance of Construction to Industry Standards

Roof

Although the roofing was not a specific part of this investigation, some opportunity for observation was afforded while using high-reach equipment for wall inspections.

Per the NRCA Roofing and Waterproofing Manual (1986 Reprinted Version), "Steep Roofing Manual", Section VI, "Application Of Asphalt Shingles":

> "C. Drip Edge
> A drip edge should be considered for use to allow water to drip off the

roof without affecting the underlying construction. Drip edges of minimum 28-gauge galvanized metal or an equivalent non-corrosive, non-staining material should be used along eaves and rakes, applied directly to the edges of the deck. An underlayment should be provided between the metal edge and the roof deck. The drip edge should extend back from the edge of the deck not more than 3 inches and should be secured with appropriate nails spaced 8 inches to 10 inches apart along it's inner edge as shown in Figures 3 and 4."

"D. Starter Course of Shingles
Before applying the first course of shingles, a row of either asphalt shingles or a 9-inch (or wider) starter strip of mineral-surfaced asphalt roofing material should be applied along the eaves. The lower edge or edges of the material should be even with the edge of the eaves."

"E. Flashings at Closed-Cut Valleys
The first step in constructing a closed-cut valley is to center a 36-inch wide strip of No. 15 asphalt saturated (not perforated) felt in the valley over the No. 15 asphalt-saturated felt underlayment. Only enough nails to hold the sheet smoothly in place should be used.
The first course of shingles should be laid along the eaves of none roof area up to and over the valley, extending it along the adjoining roof section for at least 12 inches....
...5. The first course of shingles should then be applied along the eaves of the intersecting roof area, extending over the previously applied shingles and trimmed a minimum of 2 inches back from the centerline of the valley.
6. The upper corner of each end shingle should be clipped in place to prevent water from penetrating under the courses and should then be embedded in a 3 inch wide strip of plastic asphalt cement."

"G. Flashings Against Vertical Walls (New Construction)
2...flashing shingles ["step flashing"] should be 6 inches X 7 inches in size.
The flashing shingle should be bent so as to extend 2 inches out over the roof deck, with the remainder of the shingle extending up the wall surface.
The finish siding should be brought down over the flashing to serve as cap flashing but should be held far enough away from the shingles so that the ends of the boards may be readily painted to prevent dampness and deterioration of roofing materials."

Where any observed roof overhang intersects a perpendicular wall, step flashings terminate (at best) at the bottom edge of roof sheathing. The step flashings are of minimal dimensions, roughly 2 to 2-1/2 inches on each leg,

length unknown. The flashing dimensions do not conform to industry standard. The step flashings are installed in typical roofing sequence against the wall sheathing, but with no diverter flashing as a termination. This detail allows any water on the step flashing to meet stucco or EIFS at the outer surface of wall sheathing and within a cross section of the wall finish system. This allows water to penetrate behind stucco or EIFS finish. At no roof/wall intersection as described above was any type of "diverter" or "kick-out" flashing observed at the roof edge that would divert water out and away from the wall interior.

Roofs on Buildings A, B, and C have open valleys with metal valley flashings. No close examination was undertaken on these roofs. Buildings D, E, and F have roofs with closed, cut valleys. On buildings D and E it is noted that the lower pitched, main roof shingles extend upward onto the gable (dormer) roofs, with the higher pitched gable roof shingles layered on top of the main roof. The overlapping shingles are cut approximately 2 inches short of valley center, per industry guidelines.

During invasive wall inspections access to roof edges at the rear of Building E was provided. It was noted that there is no metal drip edge on any of the roof edges, not in conformance with the referenced industry standard. On the more eastward valley of the westward gable on the rear of the building, shingle material is missing at the termination of the valley, allowing water infiltration at the fascia. Fascia at this location exhibits water damage at the location of the joints in the fascia.

A portion of the front of the roof on Building F was examined based on information provided by John Wachter that the northernmost valley on the front roof of the building had been replaced to repair a leak.

It was noted that the remaining roof valleys on the front of this building (five in all), were all constructed with the more steeply pitched gable shingles laid first, with lower pitched main roof shingles cut to form the closed valley. On the next southward valley from the northernmost valley the actual lap of shingles in the valley was not ascertained, however at the termination of the valley there was only one thickness of asphalt shingle with damaged shingles above, with no obvious valley flashing, 15# felt situate approximately 2 inches above the edge of

the roof sheathing, and no metal drip edge visible anywhere on the roof. The plywood sheathing of the main roof in the vicinity of the valley termination was discolored, water stained, and rotted to the degree that the plywood could be displaced and partially crushed by hand.

Other roof valleys on the front of this building were similarly constructed only with more shingle lap coverage at valley terminations. Fascia boards exhibit some symptom of water damage at each joint at roof valley terminations. This valley assembly as observed does not conform to industry standards.

Roof to Wall Intersections

At every observed location the roof structure is attached directly to the sheathing of the intersecting wall. Roofing felt was then installed followed by roofing shingles. Step flashings were installed in typical sequence, on top of roofing felt and beneath the first shingle, then over top of each shingle course and beneath the following course, with the vertical leg of the flashing against the intersecting wall sheathing. On stucco clad buildings wall felt extends downward from the wall sheathing to lap the step flashings. On EIFS clad buildings, no felt is installed on the wall sheathing, with the vertical legs of the step flashings placed against the sheathing. This indicates that the roofing was performed before siding. Siding materials were then installed up to and around roof components.

The combined size of the vertical and horizontal legs of the small aluminum step flashings installed on the rake portions of roofs against the wall sheathing is between 5 and 6 inches. That dimension is typically halved between the vertical leg, located against wall sheathing, and the horizontal leg installed in step-sequence with shingle courses. Wall siding finish was installed over top of the flashings and down to the roof shingles, in most cases. Where siding finishes extend down to proximity with roofing shingles a stucco or EIFS stop bead is observed to be placed so as to be in contact with roof shingles.

Step flashings terminate approximately at the lower edge of roof sheathing, leaving a space of 1-2" where there is no flashing above the fascia and shingles that are in contact with the wall sheathing. There is no diverter or kick-out flashing installed at the lowest end of the series of step flashings at the roof edge and against the wall. When water being conducted on the step flashings reaches

the bottom roof edge where no diverter flashing is installed, the water is able to enter the space between plywood wall sheathing and stucco, or to infiltrate the wall interior. Where EIFS siding is used, typically with poor or no backwrapping of the system edges, the water enters behind the EIFS finish through the unsealed edges of the foam backer to saturate the foam, pass between the foam and wall sheathing, and sometimes behind the wall sheathing. In all observed locations EIFS foam and lamina are applied so as to come in close proximity, if not in contact, with roofing shingles. No locations were observed where a proper clearance of the siding above roofing materials was observed, per industry standard.

This flashing detail was observed at every investigated location with varying degrees of associated wall damage due to water infiltration. The sheathing of the intersecting wall that is level with or above the bottom of the roof edge experienced damage from water infiltration limited to an average size of approximately one square foot. The wall areas in the wall stud bay directly below the bottom of the roof edge exhibit moderate to severe damage down to the floor framing. In two observed locations the damage also travels horizontally on the wall sheathing to include portions of the next adjacent stud bay.

Other locations with similar structural intersections that were not invasively investigated exhibit signs and symptoms (such as staining or deformity of window casings, mold or mildew of wall components, or damage to floor components below) that are indicative of similar defective flashing detail. Other than in instances of previously accomplished remediation at a particular location, it can be assumed that the configuration of components is typical at any such intersection, and can be considered a common defect.

Per the EIFS Industry Members Association (EIMA), "Guide to EIFS Construction"

- Page 15 Roof and Wall Intersection

Fig. 1 "A diverter flashing should be used wherever a water shed terminates into a vertical wall (as shown)"

"Set the diverter flashing in a full bed of roof cement between the roof sheathing and underlayment."

No diverter flashing was used on any observed location as described above. This detail is not in conformance with industry standards.

Placement and termination of the EIFS finish where it intersects a roof was inconsistent, but indicates that the finish was applied in an attempt to have the finish come in contact with the roofing shingles. Per the EIFS Industry Members Association, "Guide to EIFS Construction"

- Page 14 Dormer Flashing

"The EIFS system should be terminated above the roof line to facilitate roof repairs and treatment of EIFS termination. In addition, the clearance allows for free-flow of water and minimizes accumulation of debris."

EIFS Wall Finish

There was no secondary barrier beneath the EIFS finish, the foam being adhered to wall plywood sheathing by spot dabs of adhesive. No mechanical fasteners were observed to have been used to fasten EIFS to the walls at any investigated location, nor was there any consistent pattern of adhesive application observed. The industry standards referenced above allow for installation as described herein, although all reference or illustration in those standards does not refer to a pattern of adhesive application but rather, a solid coat of adhesive between plywood substrate and backer foam, applied with a notched trowel with the adhesive "ribbons" oriented vertically. The method of application using "spot dabs" of adhesive was in common usage during the time the facility buildings were constructed, but is not specifically supported by current installation standards. The base coat of the surface material is observed to be approximately 1/16 of an inch or less.

The original construction of the EIFS system was assessed relative to the referenced documents:

EIMA (EIFS Industry Members Association) Guide to EIFS Construction

> [Per Linda Widzowski, Administrative Assistant for EIMA, the organization does not retain archives of their old guidelines, as they are and always have been superseded by manufacturer's specifications. The only guidelines available from EIMA are those published in 2000 and reprinted in

2007, portions of which are referenced herein]

Finestone Stucco Systems (Manufacturer's Publication) "Required Design Elements; Sealants, Backer Rod, Flashing". Finestone was mentioned in site historical complaint and repair history as one of two manufacturers that may have supplied the material used on the project.

Dryvit Outsulation™ System Installation Details
This current Dryvit System most resembles the existing EIFS system. Dryvit was mentioned in site historical complaint and repair history as one of two manufacturers that may have supplied the material used on the project.

Per all of the referenced publications:

- EIFS material is depicted with reinforcing mesh and base coat turned over onto the surface adjacent to any other like or unlike intersecting material, and around onto the back of the foam for a minimum of two inches (referred to as "backwrapping"). At a majority of investigated locations little or no base coat was found on edges of foam where joints or intersecting materials were in contact with the EIFS system. The appearance of components suggests that intersecting materials were installed prior to the EIFS coatings. This approach to installation does not conform to industry standards.

- On both Fillet Joints and Butt Joints, a properly constructed, ¾ inch sealant joint is illustrated, with sealant contact specified with EIFS finish on edges of components, both type joints to have backer rod or bond breaker installed. Existing sealant joints vary widely in size and composition, and are discussed following in the section, "Sealant Joints".

- Window Sill and Jamb- All publications depict the rough openings of windows with a mesh and primer flashing system installed prior to installation of the window or overall wall finish system. No such flashing system was observed at any investigated location. Sloped EIFS below the window sills is common to all publications as well as references to diverting water down and away from window sill for proper drainage. EIFS finish at window sills is all square to the wall, with no slopes that would allow water to drain away from the window sills. All publications also refer to minimum ¾ inch sealant joints with backer rod around the entire

perimeter of windows. Existing sealant joints vary widely in size and composition, and are discussed following in the section, "Sealant Joints".

No window pan flashings, window head flashings, nor EIFS preparatory perimeter flashings were observed at any location.

- Intersection with Deck Framing depicts Z-Flashing below deck framing (on top of EIFS system below deck) and Z-flashing above deck framing. Back wrapped EIFS above deck shown with space allowed above decking for clearing of debris and snow/ice/ water. Existing deck framing is attached to building walls in several configurations with details that do not appear to be in conformance with industry publications referenced.

- Gable end fascias are depicted in industry literature as extending over the EIFS face approximately 1-1/2 inches to protect the edge of the EIFS system. Observed rake fascias do not lap over the EIFS system, but rather, have the appearance of having been installed prior to the EIFS finish. EIFS finishes extend up to adjoining material but with no backwrapping of the EIFS member, not in conformance with industry standards.

- Dormer Flashing/ End Dams, etc

  All referenced materials illustrate that the EIFS system should be terminated at approximately ¾ inch above the roof line to facilitate roof repairs and treatment of EIFS termination. In addition, the clearance allows for free-flow of water and minimizes accumulation of debris. Virtually all EIFS installations above roof surfaces came in close proximity or actual contact with roofing shingles, not in conformance with industry standards.

- Roof and Wall Intersections are always depicted with the installation of a diverter (or "kick-out") flashing used wherever a water shed terminates at or on a vertical wall. Actual construction did not include a diverter flashing, resulting in substantial water in intrusion at the majority of such locations.

Wood Clapboard Siding

On EIFS clad buildings the wall area beneath the wood horizontal trim boards is clad with cedar clapboard siding and wood corner trims. The siding is installed over 15# felt and is installed generally in conformance with industry standard practice. Where wood elements intersect or meet dissimilar materials, joints have been observed to vary from being tight to being open as much as 1/8 inch.

Stucco Wall Finish

At 3/8 to ½ inch thickness, stucco wall finish is thinner than the ¾ inches specified in provided plans, but consistent with ACI guidelines (see below). However, as in the case of EIFS finish, no damage was found that could be directly attributed to a failure of the stucco field. All observed sites of water infiltration are due to assembly defects at intersections of other components with stucco.

Per the Portland Cement Association- "Specifying Stucco/ Installation Instructions"

> "Metal lath is regularly used over stud wall construction with or without sheathing materials."

Per Finestone Stucco Systems (Manufacturer's Literature) "Required Design Elements; Sealants, Backer Rod, Flashing"

> "Approved sealant installed with approved backer rod or bond breaker tape shall be used at all transitions between EIFS and other structural elements such as windows, doors, vents, penetrations, transitions to dissimilar elements, etc."

Per the American Concrete Institute 2001 ACI 524R-93, "Guide to Portland cement Plastering": Chapter 5.1- General

> "Galvanized metal lath intended for exterior application should have a G-60 coating in accordance with ASTM A525 (hot dip process)"

5.2.1- Weather Barrier backing

> "...it is recommended that a weather barrier equivalent to asphalt-saturated draft paper or rag felt be installed behind the lath."

6.4- Casing Beads

> "Often called plaster stops, casing beads should be installed wherever plaster terminates or abuts with dissimilar material."

Table 7.4- Types of lath-attachment to wood and metal supports
For 1. Diamond mesh expanded metal lath and flat rib metal lath.
Staples- Wire gauge -16; Max. spacing vertical and horizontal- 6"

Table 11.1- Nominal plaster thickness for three and two coat work
Finish total for three and two coat work= 3/8" to ½"

Galvanized open metal lath was observed to be installed as a base for the stucco, with 15# felt layer placed against the wall sheathing. Fastening of the lath was inconsistent, with as many as 50% of observed locations having as much as 16 inches between staples that secured the lath, through the felt, onto the plywood wall sheathing. The fastening schedule is not in conformance with industry standards, above.

At approximately 40% of observed locations, no casing beads or plaster stops form the termination of stucco where stucco intersected other, dissimilar materials, not in conformance with industry standards.

The nominal thickness of the stucco finish at between 3/8 and ½ inch, while not in conformance to the provided plans, does comply with the industry guidelines quoted above.

Windows

Typical Andersen window configurations are previously described herein. In the course of investigating conditions it was noted that virtually all combination window units that were not assembled in the factory have at least one common defect. The most notable and most common window defect is the detachment of "Outside Trim Strips". These strips are a vinyl "T" shaped material that is inserted between the two site or distributor-mulled window units when they area assembled.

Per the Andersen Windows 2006 Assembly and Installation Guide, Page 7, the trim strip is to have silicone primer/ sealant applied to both underside edges of the surface portion of the strip prior to insertion into the newly mulled unit. In every unit examined no sealant was found on the prescribed portion of the component. Per Bob Miembresse, a representative of Andersen windows who performed an inspection onsite, these trim strips detached because they were not properly sealed with silicone sealant, and the displacement of the improperly installed strips could allow a substantial amount of water to pass beyond the exterior of the window. Where removed and examined, the strips exhibited no silicone sealant applied per the manufacturer's specifications.

Orientation of the trim strips on the second floor, rear window combinations have

the horizontal strips continuous, with vertical strips installed between horizontal. Per the Andersen Windows 2006 Assembly and Installation Guide, Page 7, vertical strips are to be installed continuous, with horizontal strips sealed and installed between.

Where the mull joint of two units is observed, no silicone sealant was installed at the top of the joint to seal the joint from water infiltration. Per the Andersen Windows 2006 Assembly and Installation Guide, Page 9, the joint is to be fully sealed at the top. Failure to seal this joint would allow penetrating water to migrate down the area between the two window jambs to the wall beneath the sill.

Where mulled units meet, every applicable illustration in the Andersen Windows 2006 Assembly and Installation Guide depict the integral "nailing flange" lapped to guard against water infiltration. At approximately 60% of locations observed there was no lap of vinyl "nailing flange", the majority of locations exhibiting a gap between the two flanges of the two adjoining windows where the flanges had been cut.

The assembly of these combination window units is not in conformance with manufacturers specifications.

Andersen Installation guidelines as well as industry standard practice prescribe the installation of the perimeter flanges of the window with a barrier layer (most often 15# felt) between the back of the flange and the outer surface of the wall sheathing, the barrier extending outward beyond the flange to divert water away from the window. At only one observed location was there such an installation, and only at the sill of the window. At approximately 20% of observed windows (including the one site described above), felt barrier was observed beneath the perimeter flanges of the windows extending outward beyond the flange no more than ¼ inch. At the remaining 80% of the windows observed, no barrier was evident beneath the window flanges. This installation is not in conformance with manufacturer standards nor industry practice.

Door and Window Casings

Window and door casings are made up of one and two layers of approximately 1"

foam. In some cases the two layers of foam adhered together, in others, the under layer was used more as a packer, and does not have adhesive attaching it to the surface layer. EIFS finish material coats the exterior of the casing and seals it to the field of either the EIFS or stucco siding.

All horizontal siding trims and door and window casings on both EIFS and stucco are typical of EIFS systems...foam with fiberglass mesh and EIFS finish. At observed locations only a small percentage of the casings (± 10%) had the fiberglass mesh and primer wrapped around the edge of the material to the back, sealing the component to the elements. Where adjacent materials were removed from contact with EIFS casings, the finish material exhibits a pattern matching the removed adjacent material. Portions of the casing in contact with the removed materials exhibit no primer. This practice is not in conformance with manufacturer's standards.

EIFS Buildings A, B, & C

On buildings with EIFS finish all casings have a double thickness of foam board (approximately 2 inch total thickness). In all observed locations, EIFS casing is installed in contact with or within ¼ inch of window frames. Approximately 50% of sealant joints at these locations consisted of a small closed cell backer rod and sealant. The remainder of the locations observed had simple cove joints made of sealant only, not in conformance with EIFS guidelines, which consistently depict a ¾ inch sealant joint at all intersections of dissimilar materials.

Wood door jambs are trimmed with wood brickmold. EIFS casing is installed against the brickmold, and is situate proud of the brickmold by ½ to ¾ inches. The sealant joint between these two materials is a cove joint with no backer rod, not consistent with EIFS industry standards.

Stucco Buildings D, E, F

On buildings with stucco wall finish, stucco was installed prior to EIFS casing. The casing consists of double thickness foam from the bottom up to the level of the top of the horizontal wood trim. At that height one thickness of foam continues upward installed *on top of* stucco. EIFS finish seals the casing to the stucco field.

On stucco finished buildings, casings are approximately flush to as much as ¼ inch proud of window frames. Maintenance history relates numerous complaints of leaks, resulting in an effort to resolve the leaking through the use of a "bridge tape" type of sealant. The bridge tape consists of a tape with the consistency of rubber, sized approximately two inches wide and approximately 1/8 inch thick. The tape spans the window frame to EIFS casing joint and is solidly adhered to both surfaces. Only three very small locations were noted where the tape had partially detached from the substrate, and at those locations the minor adhesion failure did not appear to compromise the water tight condition.

Garage door jambs on the stucco buildings are approximately flush with the EIFS casing. The casing is installed in contact with the jambs. The joint between jamb and EIFS casing is either filled with a sealant or covered with the bridge tape treatment.

Additional Wood Trims

Horizontal wood trim at the base of the wall is installed over 15# felt. Atop the component is an aluminum Z flashing. A second horizontal wood trim is installed at various heights, approximately 5 feet above grade (referred to as a "mid-height horizontal trim boards"). This second horizontal trim separates the EIFS or stucco above, from the clapboard or vinyl siding, below.

There was no consistent sealant joint at the location where the bottom of stucco meets the aluminum Z flashing over the horizontal trim board, although at some locations the joint had a single bead of sealant installed. Below the horizontal trim board is vinyl siding and appropriate trims.

Portions of approximately 60% of wood trims were found to have been replaced, and approximately half of the mid-height wood trims exhibited damage from water infiltration, particularly at the cut ends of the boards where they intersect EIFS window trims or are mitered at building corners.

In the historic information reviewed the described wood trims were reported to be originally installed with no space between them and the EIFS window casings. A later effort was undertaken by the developer to create space between the two

materials to allow for the installation of proper sealant joints. Buildings A, B, & C appear to have had that modification, with sealant joints sized between 1/8 and 5/8 inches in evidence at intersections of the wood trim with EIFS casings.

Subsequently many of the horizontal trims have had portions of the material replaced. At locations where replacement has been made, new lengths of the horizontal trim have been butted tight to the EIFS casing. In addition, replacement of the Z flashing atop the mid-height trim is not accomplished, leaving a small gap in the flashing adjacent to the intersection of the EIFS casing and wood trim.

These installations are not in conformance with the referenced standards for EIFS and stucco finishes.

Sealant Joints

At Window Perimeter

Window casings consist of EIFS foam with finish applied on top, their location being within ¼ inch or less of window frames. The original sealant joint appears to have been a simple cove formed between the EIFS casing and the window frame, with no bond breaker installed. Historic records relate that this configuration was suspected of leaking, and a remedy was attempted by the application of a bridge tape system, as described above in "Window and Door Casings".

At Top of Mid-Height Horizontal Trim Board

There was no consistent sealant joint at the location where the bottom of stucco meets the aluminum Z-flashing over the horizontal trim board, although at some locations the joint had a single bead of sealant installed. Below the horizontal trim board is vinyl siding and appropriate trims, with no sealant applied. The installation of sealant joints at this detail is inconsistent.

On EIFS finished buildings, sealant joints of approximately ½ to ¾ inches exist above horizontal trim board dividing the EIFS from the aluminum Z-flashing atop the horizontal trim board. At approximately half of this particular joint on all EIFS finished buildings sealant adhesion failure was noted where the sealant meets

the EIFS finish. This adhesion failure is due to the lack of primer and finish layers applied to the side of the EIFS system that forms the edge of the material at the joint.

Where subjected to demolition these joints all employed a ¾ to 1 inch closed cell backer rod. While the joints were found to be of a similar width, in approximately 30 % of those joints demolished the sealant over top of the backer rod is of a thickness of 1/8 inch or less. This is inconsistent with industry standards that consistently depict the thickness of the sealant of the joint as no less than approximately one third the width of the joint.

In nearly every observed location where the wood, mid-height horizontal trim board intersected the side of EIFS window casing, the Z-flashing terminates short of the EIFS. The vertical sealant joints at these locations vary in width, with the Z flashing that intersects the casing exhibiting a gap against the EIFS casing, allowing water to enter through cracks in the sealant, pass by the Z-flashing, and flow onto the felt or wall sheathing. This condition is noted in approximately half of the joints observed on these buildings.

At Soffit

Stucco finished buildings do not have sealant joints where the stucco meets the vinyl soffit. Stucco extends up to the j-channel of the soffit, obscuring most of the horizontal leg of the j-channel, indicating that the soffit was installed prior to the stucco. Industry standards generally specify that exterior trims, especially materials that are not as durable or as rigid as stucco, are installed over top of or adjacent to stucco, so as not to form a border or edge for the stucco.

On EIFS finished buildings a sealant joint of approximately ¾ inch in width separates the EIFS finish from the soffit material. No demolition was performed on these joints, and no adhesion failure was noted on these sealant joints.

Expansion Joints

On both wall finish systems horizontal expansion joints are installed in the area of the second floor framing. These joints are covered by an horizontally oriented

EIFS trim element that is sealed to the EIFS panels on both sides of the expansion joint, effectively nullifying the flexibility of the joint, although no obvious cracks were observed in the outer finish. Where demolished, the joints employ an approximately ¾ inch sealant joint with backer rod. Typically the edges of the foam of the EIFS system at each side of the joint are not backwrapped, which does not conform with industry standards.

At Fascia Boards

On EIFS finished buildings wood trims such as rake fascias are installed atop the EIFS field. Where the horizontal EIFS trim meets the fascia, the surface of the EIFS trim is flush with the surface of the fascia. The angled edge of the EIFS trim in close proximity to the fascia board is not backwrapped and could allow water infiltration. This meeting of the two materials is filled with a sealant with no backer rod. Adhesion failure of the sealant to the EIFS is observed at virtually all inspected locations, which amount to approximately 25% of the total of such locations throughout the complex. This method of installation is inconsistent with industry standards.

On Stucco finished buildings, similar fascia trims appear to have been installed prior to stucco, with stucco finish extending up to the fascia board. Cracking and/or gaps at the intersection of these two materials is prevalent at the majority of observed sites, with some sites exhibiting a light application of sealant to the intersection, the sealant being applied in a light cove configuration. Industry standards generally specify that exterior trims, especially materials that are not as durable or as rigid as stucco, are installed over top of or adjacent to stucco, so as not to form a border or edge for the stucco.

At Miscellaneous Vents

Vents in contact with wall finish (typically serving as dryer or bathroom vents) are typically either metal or plastic "caps" or "hoods" with clappers attached to 4" vent pipe. The vents on buildings A, B, & C are metal and are installed against the wall sheathing. EIFS system is installed surrounding the vent, with a cove-type application of sealant on the top and sides between the hood and edge of EIFS foam. An improvised, sloped finish of the EIFS at the bottom of the vent does not

extend fully to the sides of the vent, possibly allowing water to enter the assembly as built.

Vent locations observed all appear capable of allowing water infiltration into the wall. Manufacturer's installation details for such penetrations call for the use of decay and corrosion resistant blocking to mount the fixture, providing a solid surface to which to install an approved sealant joint. Observed vent penetrations through the EIFS were not properly installed per manufacturer's guidelines.

On buildings D, E, & F, plastic vent hoods are mounted on the exterior of the stucco, with a sealant bead around the perimeter of the vent flange. Two of the three vents accessed had partially detached from the stucco surface and could allow water to enter the wall.

Rear Deck Framing

Some rear deck framing had been installed subsequent to wall siding and may or may not be original; the vintage of rear deck framing is unknown. Some decks have of plank flooring, while others have a coated surface, such as fiberglass. Two decks observed that have a fiberglass type finish were not installed with that finish extended up the wall sheathing beneath siding. The joint between the deck finish and EIFS is filled with sealant in the form of a cove joint.

Locations where deck framing returns to the siding are finished with various sealant joints, approximately half with backer rod and half without. Improperly constructed sealant joints do not conform to siding manufacturer's installation guidelines. Half of the sealant joints observed at this type of location exhibit adhesion failure to either EIFS system or deck framing.

Observed deck framing exhibited various methods and conditions in the attachment of the framing to the buildings. On the three EIFS finished buildings (A, B, & C) the deck "ledger" or perimeter framing that is in contact with wall surfaces had apparently been installed prior to siding installation. The main ledger against the dwelling wall is doubled. Sealant joints of approximately ¾ inch in width between the EIFS finish and the deck ledger are typical. This configuration conforms to industry standards for EIFS finish installation.

An exception to this existing condition is the underside of the eastward, second floor, rear deck of Building B, where a corrugated PVC or fiberglass material has been installed on the underside of deck joists. On this particular deck it is impossible to determine the framing and sealant joint configuration without removal of the ceiling material. It is also noted that at this location there was observed substantial water damage to the side wall and rear corner wall sheathing and framing.

On Buildings D and F deck framing is installed on top of the stucco wall finish, and appears to be attached to the wall with nails. No access was available to examine the area above the deck framing on these buildings. This installation does not conform to stucco manufacturer's installation guidelines or standard construction practice.

On Building E, the single deck ledger is installed to the plywood wall sheathing with nails. Stucco finish is installed up to the wood with no sealant joints between the two materials. This configuration is not in conformance with manufacturer's guidelines for the installation of stucco.

Observed Defects Summary

No damage to plywood wall sheathing or framing was observed that could be directly attributed to deficiencies in the field of the EIFS or stucco wall finishes. All observed damages were caused by conditions and details at intersections of systems and materials, or where other components penetrate the siding surfaces.

Termination of Roof Slopes

Where roof edges intersect walls, the step flashings at the wall have not incorporated a diverter flashing at the termination of the roof edge. This defective installation appears to be typical at every similar location, and is responsible for serious damage to wall components from water invading the wall unit.

Rear Deck Framing

Where the framing of rear decks attaches to the building conditions exist that could contribute to substantial water intrusion into the wall.

Window Joinery

Distributor or site assembled window combination units are not properly assembled and sealed. Perimeter flashings are insufficient or non-existent.

Roofs

Roof edges and roof valleys are not all constructed in conformance with industry standards, with evidence that at some locations water infiltrates the roof edges due to these defects.

Sealant Joints

Sealant joints are inconsistent, many not in conformance with industry standards. Adhesion failure of defective joints contributes to water infiltration of the walls throughout the complex.

Vents

Many functional gable vents as well as mechanical vent hoods are damaged or deteriorated and can be admitting intrusive water into the buildings.

Fascia/Trim Intersections with Wall Finish

Where wall finishes intersect wood fascia trims wall finishes do not exhibit conforming resolution or water-proofing of the material at the intersection, either by proper backwrapping of the material or by proper sealant joints.

Irrigation System

Poorly oriented or performing components of the landscape irrigation system deposit large amounts of water under pressure onto wall and foundation surfaces. This application of water with force contributes to wall component damage and excessive moisture in the walls and perimeter of all buildings.

Proposed Remediation

Inspection has revealed that damage to walls resultant from water intrusion is caused by defects in methods and execution in a wide range of details on the buildings, and not due to one particular cause. While each of the defects could be addressed individually, the sum total of the remediation required is great enough (at least on the EIFS finished buildings) to suggest that the total

recladding of the buildings could be cost effective. The effectiveness of any single proposed remedial action is not clearly quantifiable in the context of the aggregate of all remediation activities. We represent that all of the following remediation activities will contribute both singly and in common with the others to the substantial relief of water infiltration and moisture content within the walls. Many of the remediation options are linked to others by physical proximity or the interdependence of components. Some remediation options cannot be performed without effectively performing other options. We recommend that the full range of remediation activities represented herein be accomplished.

In addition to the considerations noted above, a distinction can be drawn between the scope of damage found on stucco-clad buildings verse EIFS-clad buildings, the EIFS-clad buildings exhibiting more severe and wide-spread damages than similar problem locations on the stucco-clad buildings.

Prioritization of Remediation Activities

Remediation activities are prioritized hereinafter to reflect our subjective judgment as to which specific actions are most likely to be most beneficial insofar as remedying the existing conditions in wall finishes and components that have caused damage. An attempt has been made to present remediation tasks in order of subjectively rated cost to benefit ratios as possible. However, as described above, some activities are linked to others, and must be partially if not completely accomplished along with the related activities, and the accomplishment of all of the remedies would be required to eliminate the substantial water intrusion into the walls revealed by our inspections.

Remediation Activities Summary, Cost; Prioritization

Table 1, below, presents the remediation activities in order of subjectively rated cost/benefit ratios as possible. Cost estimates are preliminary and subject to site conditions and/or design. It is understood that each location must be demolished and assessed, and that the scope and quantity of damage at each location will vary. Costing of remediation is based on RSMeans Repair & Remodeling, Building Construction, and Facilities Maintenance and Repair Cost Data Volumes from 2006 and 2007, as well as experiential data collected from other projects. A 20% contingency has been added to reflect the cost estimates being based on schematic concepts, not hard, designed tasks. Costs of design, bidding and

Contract Administration are not included but are shown to add about 15% to the project cost.

Table 1- Remediation Activities/ Costs

Framing and Sheathing Repair			**$49,600**
Description: Assume one repair requiring shoring ($3,000), 4 repairs requiring framing repair ($4,800), and 4 repairs requiring sheathing replacement ($3,200). Assume this requirement for 4 buildings.			
(See calculation notes)			
	Per Building	$12,400	
ESTIMATE TOTAL IS FOR 4 BUILDINGS TOTAL			
Modify Roof Flashings: Install Diverter Flashing			**$9,840**
Description: Add diverter flashing at each roof edge/wall intersection(wall demo by others)			
Fabricate/ Install flashing each @ 100/hr Incl. mobilization		$200	
Material		$5	
	Per Location	$205	
Locations per building= 8			
	Per Building	$1,640	
Refurbish Andersen Window Combinations			**$35,580**
Description: Remove existing ext. trims, seal openings and install new ext. trims. Add flange pieces. @100/hr			
1 window Demo (includes exposing perimeter flanges)		$100	
Install Flange pieces		$50	
Seal openings		$25	
Install ext. trims		$100	
Materials: trim strips, sealant, misc.		$120	
Mobilization, O.H. & Profit		$60	
	Per Window	$455	
Window combos per building = 6			
	Per Building	$2,730	
Assume possible required replacement of 1 unit per BLDG			

	Window Unit	$1,400	
	Replacement Labor, mobilization, debris, etc.	$1,800	
	Single Unit Total	$3,200	
	Per Building	$3,200	
Repair/Adjustment Andersen Awning Windows			8,400
Description: Reset sash hinge, replace sash bottom weatherstrip			
Labor- reset hinges @ $100/hr.		$125	
Install weatherstrip		$50	
Materials		$25	
	Window Total	$200	
AVG 7 windows per building			
	Building Total	$1,400	
Repair/Replace/Create Sealant Joints		(3 Bldgs)	$26,793
Description: Restore/replace sealant joints. Stucco Buildings only, assume 50%. (EIFS joints replaced in recladding of buildings.)			
	Typical building sealant joints LF	$1,374	
	50%=	$687	
	Cost per LF	$13	
	Total 1 Building	$8,931	
Repair Roof Valleys			$10,320
Description: Rebuild roof valley terminations and roof edges to seal out water penetration as required			
	Typ. Material	$30	
	Typ. Labor @ 100/hr incl. mobilization	$400	
	Per Location	$430	
Avg. 4 repairs per building			
	Avg. per Building	$1,720	
Irrigation System Assessment and Remediation			$6,000

Description:			
Service Assessment/Survey @ $600		$600	
Testing @ 500/bldg		$3,000	
Repairs, Adjustments, new heads @400/bldg		$2,400	
Replace Gable Vents			**$2,320**
Description: Replace wood gable vents with vinyl replacements (removal of siding and trims as required)			
	Vent	$90	
	Labor & mobilization @ 100/Hr.	$200	
	Per Vent	$290	
	Estimate 8 vents		
Stucco Demo and Repairs			**$65,100**
Description: Demolish stucco for wall repairs, patch and repair stucco after repairs			
	Assume 1 repair at 200 SF	$200	
	4 repairs at 80 SF	$80	
	4 repairs at 30 SF	$30	
	Single building Total	$310	
	Cost / SF (selective demo, patching)	$70	
	Total per building	**$21,700**	
	Estimate 3 Buildings		
EIFS Casings at Stucco Repairs			**$25,560**
Description: Install new EIFS trims where removed for repairs at stucco buildings (incl. windows)			
	Total of casings on one building	$710	
	Assume 60% Removal required	$426	
	Cost per LF	$20	
	Total one building	$8,520	
	Assume three buildings		
EIFS Demo			**$84,000**

Description: Demolish all EIFS on Bldgs A, B, & C			
	Total SF one building	$3,500	
	cost pet SF demo/disposal	$8	
	Cost per building	$28,000	
	Assume three buildings		
New Vinyl Replaces EIFS on BLDGS (A, B, & C)			
Description: Install new vinyl siding and trims, replacing former EIFS on Buildings A, B, & C			$63,000
	One building SF	$3,500	
	Cost per SF new vinyl	$6	
	Total one building	$21,000	
	Assume 3 Buildings		
New Stucco Replaces EIFS on BLDGS (A, B, & C)			$101,178
Description: Install new stucco wall finish replacing former EIFS on Buildings A, B, & C			
	One building SF	$3,500	
	Cost per SF new stucco	$3	
	Total one building	$10,500	
	One Building Total EIFS Casings	$710	
	Cost per LF	$30	
	Total one building	$21,300	
	Synthetic Horizontal trim (Azec, etc.) LF per BLDG	$428	
	Cost per LF installed	$5	
	Total one building	$1,926	
	GRAND total one building	$33,726	
	Assume three buildings		
	Estimated Direct Cost		$487,691
	20% Contingency		$97,538
	15% Professional Fees		$87,784

Total Estimated Project Cost	$673,014

Remediation Description

Framing and Sheathing Repair

The amount of framing and sheathing repair required at each location of damage on each building will vary based on multiple influences, and cannot be accurately predicted. Based on observations during invasive wall inspections we have projected a typical, average quantity of repairs for each building. Assuming (for each building) one repair requiring shoring, four repairs requiring repair to structural framing, and four repairs requiring wall sheathing replacement, the estimated cost of just framing and sheathing repairs for the complex is $49,600.

Modify Roof Flashings: Install Diverter Flashing

At each location where a roof edge intersects a wall, the step flashings of the roof shall be exposed (by others). A final, special step flashing shall be installed at the bottom edge of the roof that will serve as a diverter or "kick-out" flashing, designed to divert water away from the exposed edge of the siding material. This remediation is estimated to cost approximately $205 per location, $1,640 per building, and $9,840 for the entire complex.

Refurbish Andersen Window Combinations

On all Andersen combination window units that were not factory combined, remove all exterior trim strips. Seal all voids at the top of windows where mulling joint is exposed. Apply silicone sealant per manufacturer's specifications to new exterior trim strips and install.

On exposed window nailing flanges install additional flange material to close, bridge, and properly flash locations where nailing flanges were not lapped per manufacturer's specifications.

In view of the potential damage to window units due to leakage, it is assumed that one window combination unit will need be replaced on each building. This combination of remediation efforts is estimated to cost approximately $5,930 per building or $35,580 for the entire complex.

Repair/Adjustment of Large Andersen Awning Windows

On all large Andersen Awning Windows, detach sash from "swing arm" side hinges. Fill screw holes and re-drill to adjust resting height of sash upward. Re-attach sash onto hinges. Replace "bulb"-type weather stripping on bottom edge of operating sash. This remediation is estimated to cost approximately $8,400 for the entire complex.

Repair/Replace/Create Sealant Joints

Throughout stucco clad buildings, no sealant joints exist where sealant joints should exist, or sealant joints are deteriorated. At such locations siding needs to be cut back, prepared, and a proper sealant joint installed. At other locations sealant joints are of insufficient size or configuration, or have damage that requires repair. These joints should also be repaired/replaced/created as required.

No sealant joints are accounted for in the three EIFS finished buildings, as full recladding (including new sealant joints) is recommended.

Based on observations we are assuming 50% of existing sealant joints represents a realistic figure for repairs or additions to sealant joints on each building. We estimate approximately $8,931 per building for this work, or $26,793 for the three stucco-clad buildings.

Repair Roof Valleys

Rebuild roof valley terminations and roof edges as required to eliminate water intrusion through the roof edge. We estimate 4 repairs per building at $1,720 per building or $10,320 for the entire complex.

Assessment Of Irrigation System

We have not performed any assessments, nor have we designed any remediation to the existing irrigation system. During our inspections we observed irrigation components and control pits located within a foot of foundation. Within one hour of the deactivation of the irrigation system we inspected the site for water deposits on walls and foundations. The inspection of the site revealed four locations on Building A, one location each on Buildings B and C, four locations on Building D, five locations on Building E, and six locations on Building F, all of

which were observed to be covered in water droplets, presumed to be deposited by irrigation system emitters. We recommend that the irrigation system be inspected by a licensed irrigation contractor. Leaking piping and valves or poorly oriented sprinkler heads can contribute to excessive moisture in the crawlspace as well as copious amounts of water being applied to siding components under pressure Such an application of water could cause leaking and wall component damage.Comprehensive inspection and remediation of the irrigation system is estimated to cost approximately $6,000.

NOTE: *The same assessment and repair of irrigation system was recommended in our report entitled, ""Crawl Space Conditions: Moisture, Ventilation, Flood Venting and Impacts of Site Drainage", dated August 13, 2007 The assessment estimate is included herein for thoroughness, but obviously only need be accomplished one time.*

Replace Deteriorated Gable Vents

Replace deteriorated existing wood gable vents on all stucco buildings (D4,E5, & F6) as required and replace with vinyl vents of same size. 8 vents need replacement, the estimated cost for this work is $2,320. (This task assumes that on buildings A(1), B(2), and C(3) vents will be replaced during replacement of EIFS finish with new stucco).

Stucco Demolition and Repair- Sided Buildings (D,E,&F)

Recommended repairs to Stucco Sided Buildings are limited to those procedures outlined above. There is no apparent, inherent defect in the stucco element. Issues that require remediation, as outlined above, are associated with adjoining systems or poor installation techniques, and can be remediated without wholesale removal of the stucco finish.

Following repair of the defects on these buildings, stucco finish will be repaired to restore the original appearance and finish. While the actual amount of this work cannot be quantified until the full extent of damage can be revealed, presumptions have been made for estimating purposes, the presumptions based on observed conditions.

The removal and repair of stucco finish is estimated at $21,700 per building or

$65,100 for the three buildings.

EIFS Casings at Stucco Repairs

Where repairs to elements of the stucco-sided buildings are required, EIFS type casings (trims) must be removed and replaced. The replacement of these trims is estimated at $8,520 per building or $25,560 for the three buildings.

Repairs to EIFS Sided Buildings (A,B,&C)

Due to the severity and extent of water intrusion on the EIFS sided buildings, careful consideration is due the approach to repair and mitigation of the leaking conditions. Four scenarios rate consideration:

1. Remediate windows, spot demolition and repair of the existing EIFS siding system at known damage locations, investigation of possible extended damages and repair. While this approach seems prudent in scope, the observed amount of damage and proposed repairs would result in easily half of the existing EIFS siding and trim being removed in the repair effort. Such selective demolition is labor-intensive, the cost of the work potentially approaching or exceeding costs of full removal and replacement.

A vintage, non-draining EIFS wall finish will always be suspect, the suspicion amplified by observed shortcomings in the installation methods of the original material. Such a wall system left partially remediated should require periodic inspection, will have a potential for as yet unreported leaks and damage, and will eventually require replacement due to normal life-span of the system. In addition, legitimate or not, there is a stigma attached to non-draining EIFS with consumers. Retention of the repaired original system could possibly affect the desirability, insurability, or even the value of the property. The only possible reasoning for retention of the repaired, current system is a financial inability to correct the situation. For these reasons, remediation and retention of the existing siding system is not recommended.

2. Remediate windows in conjunction with full removal of existing EIFS, replacement with an EIFS system that provides drainage. The EIFS with drainage system is an industry evolution that has accounted for inevitable water intrusion, allowing intrusive water to drain down and out of the system rather than invading wall components. Performance of these systems, when properly installed, is good, however improper installation will result in problems similar to existing. This change should be accompanied by replacement of the wood clapboard siding and trims beneath the horizontal wood trim. This wood siding has been subject to accelerated deterioration in the past, and could be replaced with cement board siding that could have finish applied to match the EIFS

system. This option is not recommended as there are reported industry issues with the amount of improvement the drained system affords, and the possibilities of mistakes or erroneous techniques on the part of an installer could result in similar problems in the future.

3. Remediate windows as described, remove existing EIFS, make repairs to exposed wall components, and install a vinyl siding system. The installation of vinyl siding to replace the EIFS would make use of the most common siding material currently installed in residential use. The costs of a vinyl siding system (excluding the most premium materials) are the most affordable of all options. Vinyl siding would also replace the wood clapboard and trims currently in use below the horizontal trim boards. The use of vinyl as a replacement siding system however, will result in a substantially different appearance in the first three buildings, and will establish a very different monitoring and maintenance program than the other three buildings. The perceived value of the two different types of buildings may be affected within the owners of the complex. The cost of the OPTION of installing vinyl siding on Buildings A, B, and C is estimated to be $63,000.

4. Remediate windows as described, remove existing EIFS, make repairs to exposed wall components, and install a new, three-coat stucco wall finish. From a practical standpoint a true stucco wall finish has inherently less potential for leak or other problems than does the existing EIFS. Properly installed, the performance of exterior stucco finish is time-tested and the system is recognized as a suitable option for residential structures. The wood clapboard and trims currently in use would be replaced with vinyl siding below the horizontal trim boards. Such a finish would bring these three buildings into a similar finish scheme to the other three buildings. This approach would provide a uniformity of appearance and finish throughout the complex. It would also result in a single, uniform monitoring and maintenance program, with similar materials, product lifespans, with sealant and finish materials being common to all six buildings. This siding option is recommended by Hyland Design Group, and is estimated to cost $33,726 per building or $101,178 for the three buildings currently clad in EIFS.

Financial Considerations

We have recommended the removal of the existing EIFS on Buildings A, B, and C, the repair of any encountered damage to wall structure, and the installation of a stucco wall finish system, to increase the reliability of the siding system as well as provide uniformity in site conditions. While the expense of the suggested remediation is substantial, an analysis of financial options would suggest several ways to accomplish the remediation without catastrophic expenses in the short term. A basic example of loan terms and payments is provided in Table 2, below.

Note:

Table 2 is presented only as an example and in no way is to be construed as financial advice. Please consult a certified financial adviser for financial guidance.

Table 2- Finance Example

Loan Principal	$675,000				
Interest Rate	6.50%	6.75%	7%	7.25%	7.50%
Term	TOTAL MONTHLY PAYMENTS				
15 Years	$5,879.97	$5,973.14	$6,067.09	$6,161.82	$6,257.33
20 Years	$5,032.62	$5,132.46	$5,233.27	$5,335.04	$5,437.75
25Years	$4,557.65	$4,663.65	$4,770.76	$4,878.95	$4,988.19
	Monthly Payments Divided between 24 Units				
Interest Rate	6.50%	6.75%	7%	7.25%	7.50%
Term	Per Unit MONTHLY PAYMENTS				
15 Years	$245.00	$248.88	$252.80	$256.74	$260.72
20 Years	$209.69	$213.85	$218.05	$222.29	$226.57
25Years	$189.90	$194.32	$198.78	$203.29	$207.84

Opinions of Michael W. Hyland

These opinions are preliminary and based on the materials reviewed to date. Additional information may cause these opinions to be modified, or even reversed.

Relationship of Causes to Original Design and Construction

Conditions of mild to severe damage to wall components, including wall sheathing, insulation, and framing, are the result of defects in the original design and construction of the Catalina Cove development by Parkshore Development, and not of any deficiencies in maintenance or operation of the premises by the Owners.

As to Causal Relationship with Defects Observed

Deficiencies in construction methods of roofing, deck framing, and wall finish installation allow the penetration of water into and behind the exterior wall finishes, causing damage to wall sheathing, framing, and insulation, as well as perimeter subfloor and floor framing at some locations.

The assembly of window combination units not in compliance with manufacturer's instructions has allowed the infiltration of water into the enclosed spaces around the subject windows, causing damage to interior finishes as well as to wall framing, sheathing, and insulation.

Industry Precedent and Commonality of Observed Defects

Industry and legal publications and resources referenced herein constitute a very small portion of a body of data related to documented problems with installations of EIFS wall finish. The cited materials are a part of a vast documentation of observed defects in design and installation, of remediation and litigation, all related to EIFS wall finish during a time period including the years that the Catalina Cove project was constructed. The sum total of such data is too large and redundant to include herein; the selected references being representative of such material.

In all four included references, The EIFS Legal Network, New Jersey EIFS, DSP Inspections website content, and National Association of Home Builders Research Center, all include reference to installation defects similar, if not identical, to those found in the buildings of Catalina Cove, including some of the deficient assembly details found on the stucco clad buildings. The overwhelming body of documentation on this subject is definitively supportive of our observations and conclusions.

Remediate As Soon as Possible; Obtain Additional Documentation During Remediation

We recommend that the association proceed immediately with steps necessary to remediate the defects in the exterior envelopes of the buildings. Permanent damage is ongoing. Prompt action will limit the extent of remediation of framing damage to the degree possible.

Given the present pending litigation with the developer, comprehensive documentation of existing conditions should be performed concurrent with remedial work, as the full extent of damages is not fully quantified.

Construction Documents Preparation, Bidding a Prerequisite to Remediation

We recommend that prior to any remedial work we develop contract documents to include plans and/or specifications as appropriate to unambiguously specify the scope of remediation. Work should proceed only in conformance with such documents and after competitive bidding and issuance of all necessary permits.

APPENDIX

Exhibit A: Excerpts from Portland Cement Association Standards for Stucco Materials and Installation

Exhibit B: EIMA Guide to EIFS Construction

Exhibit C: Finestone System Design Guide 1025474

Exhibit D: Dryvit Outsulation Standard Detail Recommendations and Specifications for the Installation of Dryvit Systems

Exhibit E: Excerpts from Andersen Windows Installation and Assembly Guides

Exhibit F: Excerpts from **www.stuccolaw.com** (EIFS Legal Network) "EIFS Problem or Shoddy Construction"

Exhibit G: Excerpts from **www.njeifs.com** (New Jersey EIFS) "What Are the Problems with EIFS?"

Exhibit H: from **www.dspinspections.com** Excerpts from the 1999 NAHB (National Association of Home Builders) Research Center listing the most common problems they found that were associated with water intrusion in EIF

systems.

Exhibit I: NAHB Research Center publication Water Intrusion and Remediation for Wood Frame Homes with Exterior Insulation and Finish Systems (EIFS)

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EXHIBIT A

Excerpts from Portland Cement Association Standards for Stucco Materials and Installation

Report of Michael W. Hyland

Wall and Exterior Finish Conditions: Impacts of Water Infiltration and Resultant Issues

Catalina Cove Condominium

P. 5168

ACI Manual of Concrete Practice 2001
Part 524 2.1 Weather Barrier Backing
"...it is recommended that a weather barrier equivalent to asphalt saturated draft paper or rag felt be installed behind the felt. Such paper should be applied weather board fashion, lapped not less thatn 2 in. at horizontal joints, and not less than 6 in. at vertical joints."

524 6.4 Casing beads
" Often called plaster stops, casing beads should be installed wherever plaster terminates or abutws with dissimilar material."

524 Table 7.4 Types of lath attachment to wood and metal supports
Maximum spacing of fasteners for diamond mesh expanded metal lath in both vertical and horizontal directions is 6".

Report of Michael W. Hyland

Wall and Exterior Finish Conditions: Impacts of Water Infiltration and Resultant Issues

Catalina Cove Condominium

P. 5168

EXHIBIT B

EIMA Guide to EIFS Construction

TYPICAL EIFS CONFIGURATION

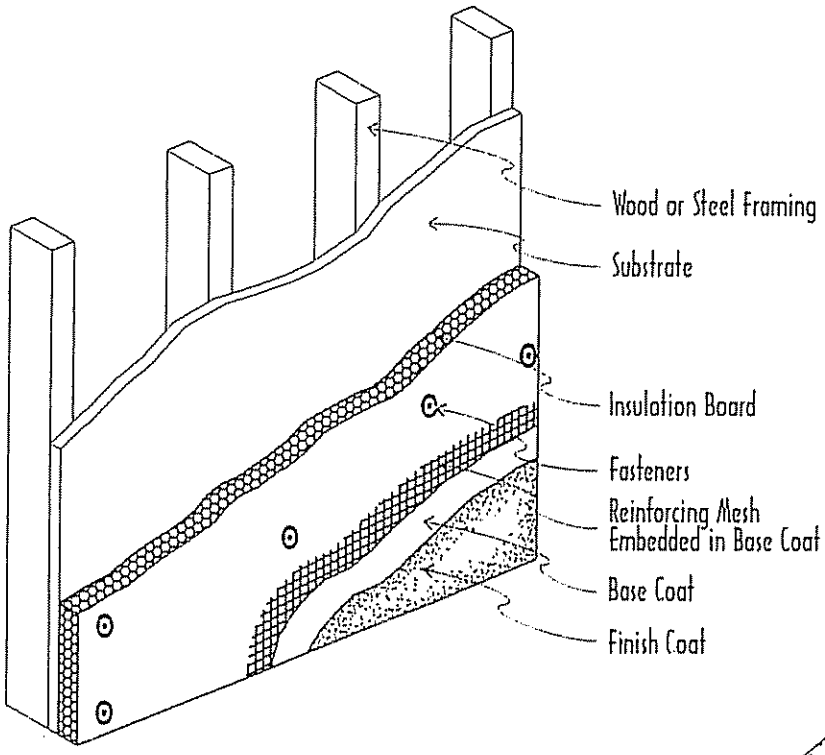

Fig. 1 STEEL OR WOOD FRAMING
EIFS may be attached by mechanical fasteners (as shown) or by adhesive (as shown below).

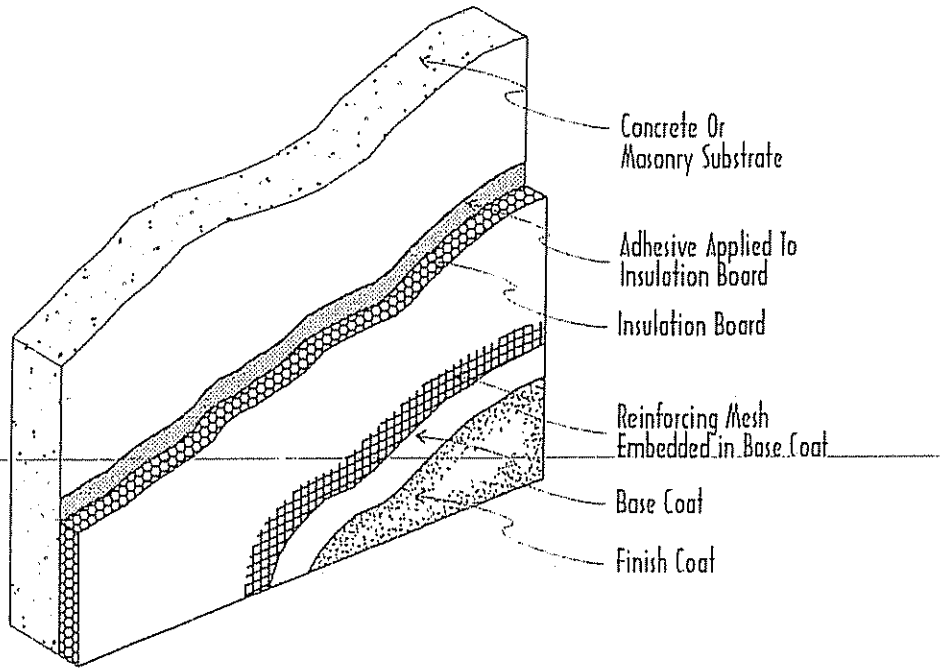

Fig. 2 CONCRETE AND MASONRY
EIFS attached to concrete or masonry using adhesive. Mechanical fasteners may also be used.

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EPS BOARD LAYOUT

Fig. 1 EPS BOARD LAYOUT

The Expanded Polystyrene Board (EPS) is placed on the wall in a running-bond pattern. The first row is generally half width to minimize EPS board joints from lining up with sheathing joints. To decrease base coat stress at corners of wall openings, EPS boards are "L" cut

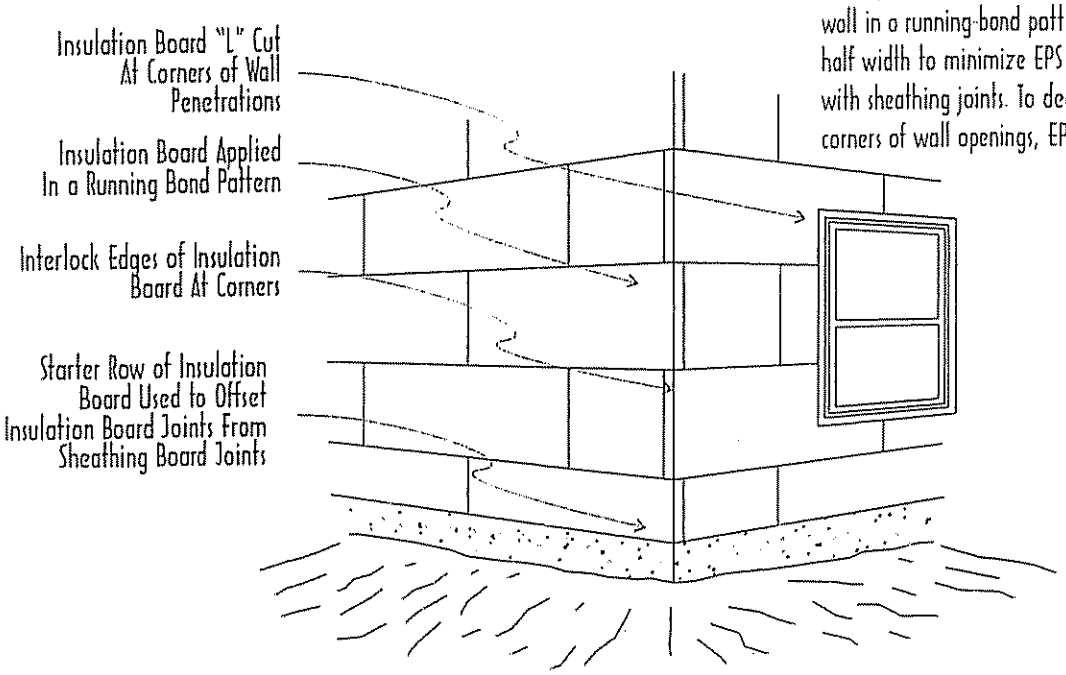
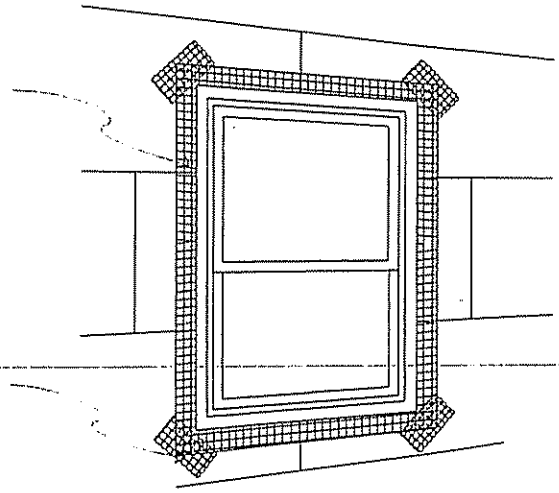


Fig. 2 MESH TREATMENT AT FENESTRATION

To further guard against cracking, diagonal pieces of mesh called butterflies are placed over the wrapped mesh at corners of the opening



NOTE: Window flashings, not shown, are placed at the head and sill.

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OPTIONS FOR TERMINATING AT FOUNDATION

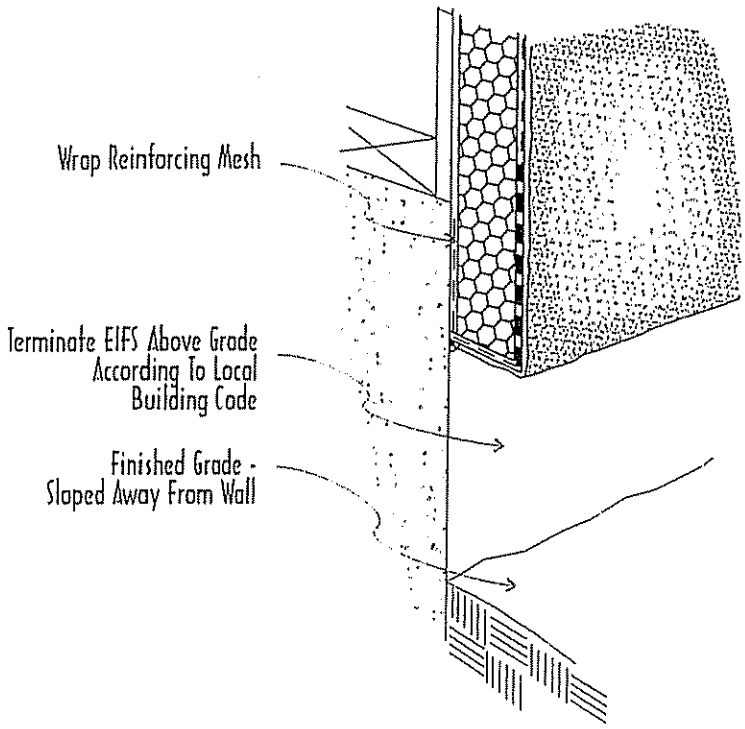

Fig. 1 WRAPPING - Alternate 1
Fiber mesh located between substrate and insulation is attached either by base coat, adhesive, or mechanical anchorage.

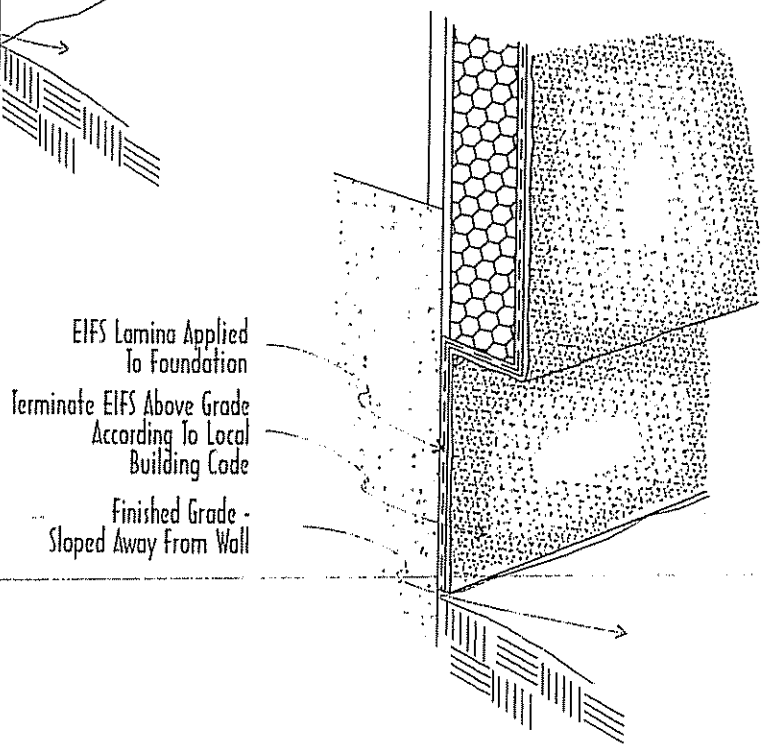

Fig. 2 WRAPPING - Alternate 2
To give the foundation the appearance of EIFS, the reinforced base coat and finish may be lapped onto the foundation.

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SEALANT CONFIGURATION OPTIONS

Refer to the sealant manufacturer's guidelines for specific installation requirements.

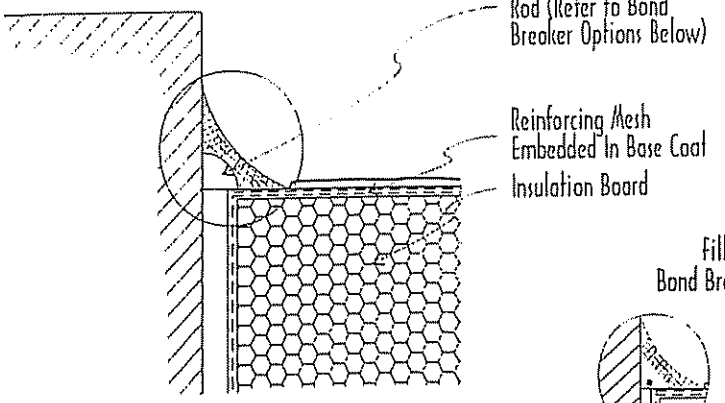


Fig. 1 FILLET JOINT

Fillet beads may be used for weather seal joints, such as at window and door perimeter. Note that sealant is applied to the reinforced base coat and not to the finish coat.

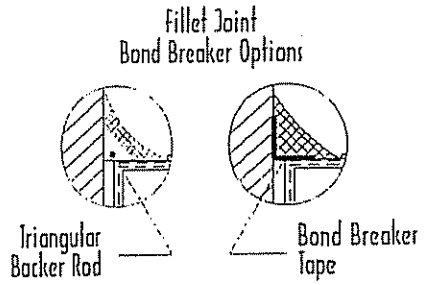
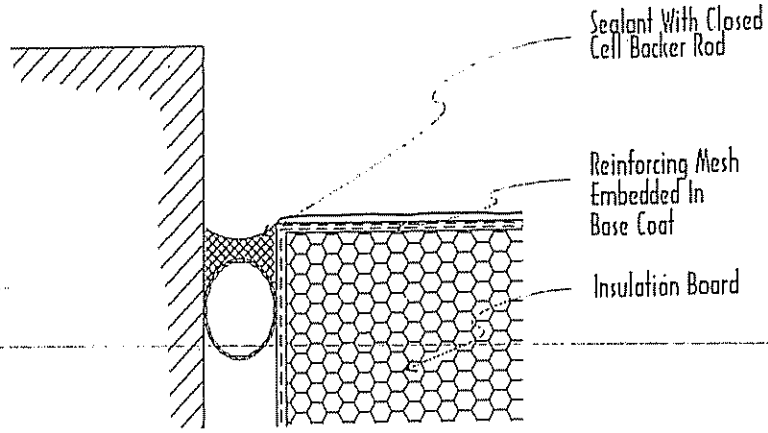


Fig. 2 BUTT JOINT

Expansion joints should be designed for a minimum of four times the anticipated movement, but not less than 3/4" (19 mm). For joints where movement has been determined to be negligible, the minimum butt joint size is 1/2" (13 mm). Note that sealant is applied to the reinforced base coat and not to the finish coat.



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WINDOW - METAL FRAMED, EXPOSED SILL PAN

Refer to the window manufacturer's guidelines for specific installation requirements.

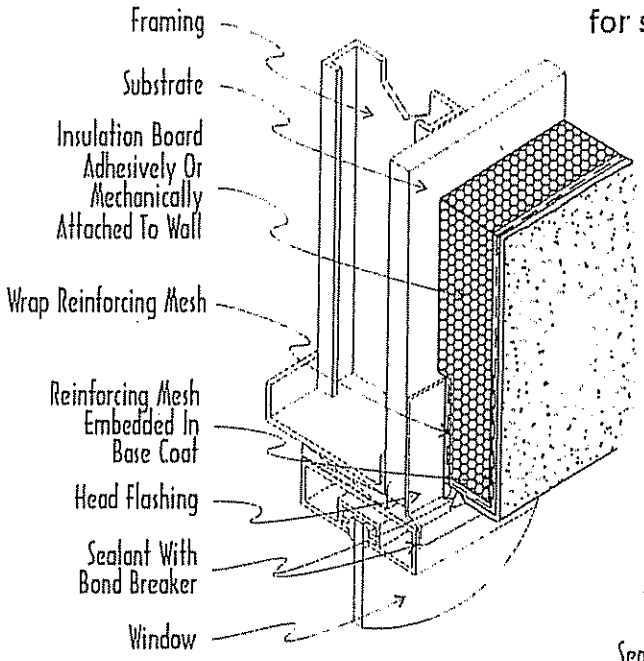

Fig. 1 WINDOW HEAD

Even with the use of head flashing, sealant is still required, as indicated, and serves to complement the flashing in establishing a water tight, continuous weather seal between the EIFS and the window frame

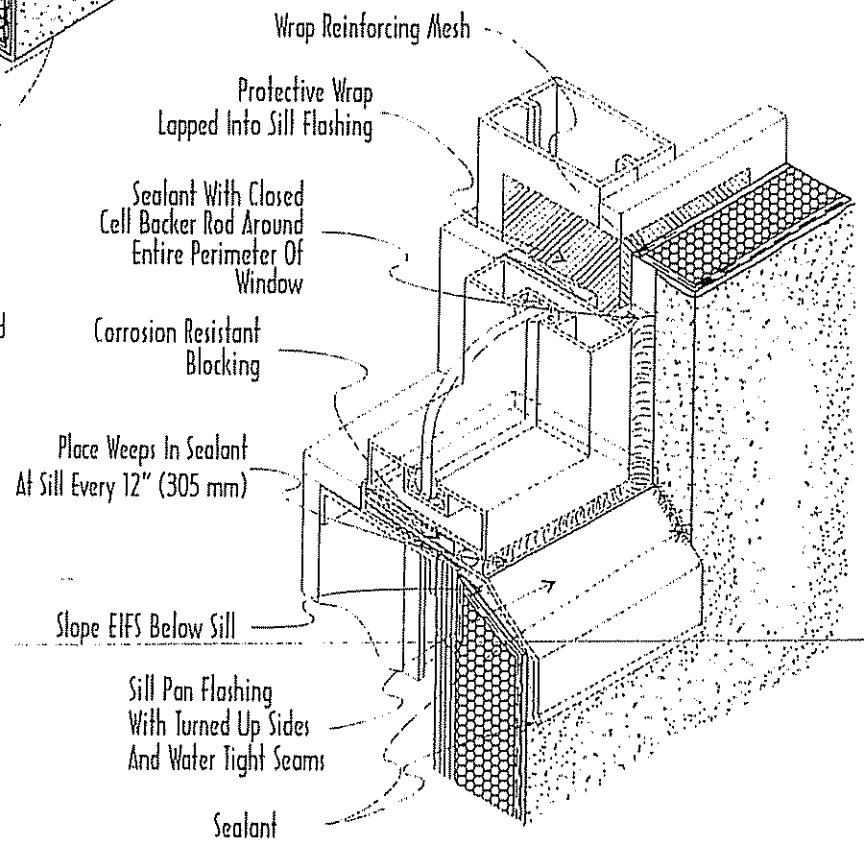

Fig. 2 WINDOW SILL AND JAMB

The purpose of a sill pan flashing is to catch water that may breach the window's barrier or pass beyond the sealant. The flashing should extend between the framing members of the rough opening and be sloped to allow water to drain to the outside of the EIFS. Also, sill pan flashing end dams should extend 1/8" to 3/16" beyond outer plane of window frame Exposed end dam edge may be covered with sealant if desired for improved appearance. To properly fabricate this detail, the EIFS should be installed before the pan flashing is set in place. This detail reflects an exposed sill pan However, this type of window may also be installed with a concealed sill pan as depicted in figure 2 of drawings 6 and 7

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WINDOW - NAILING FIN, CONCEALED SILL PAN

Refer to the window manufacturer's guidelines for specific installation requirements.

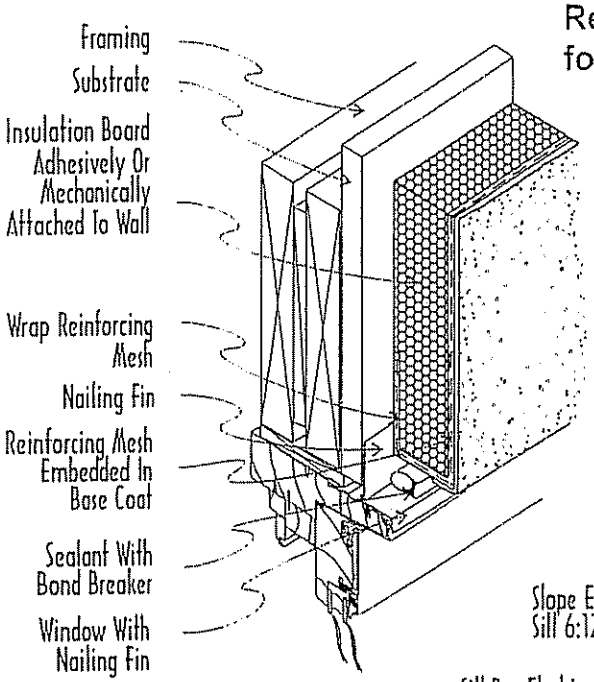

Fig. 1 WINDOW HEAD

Some finned windows are considered "self-flashed". However, a careful examination should be made of the joinery between the head, jamb and sill fins to ensure continuous protection against air and water passage. Any breach in the window's outer cladding should be resolved with additional flashing and/or sealant. Consult the window manufacturer for installation recommendations.

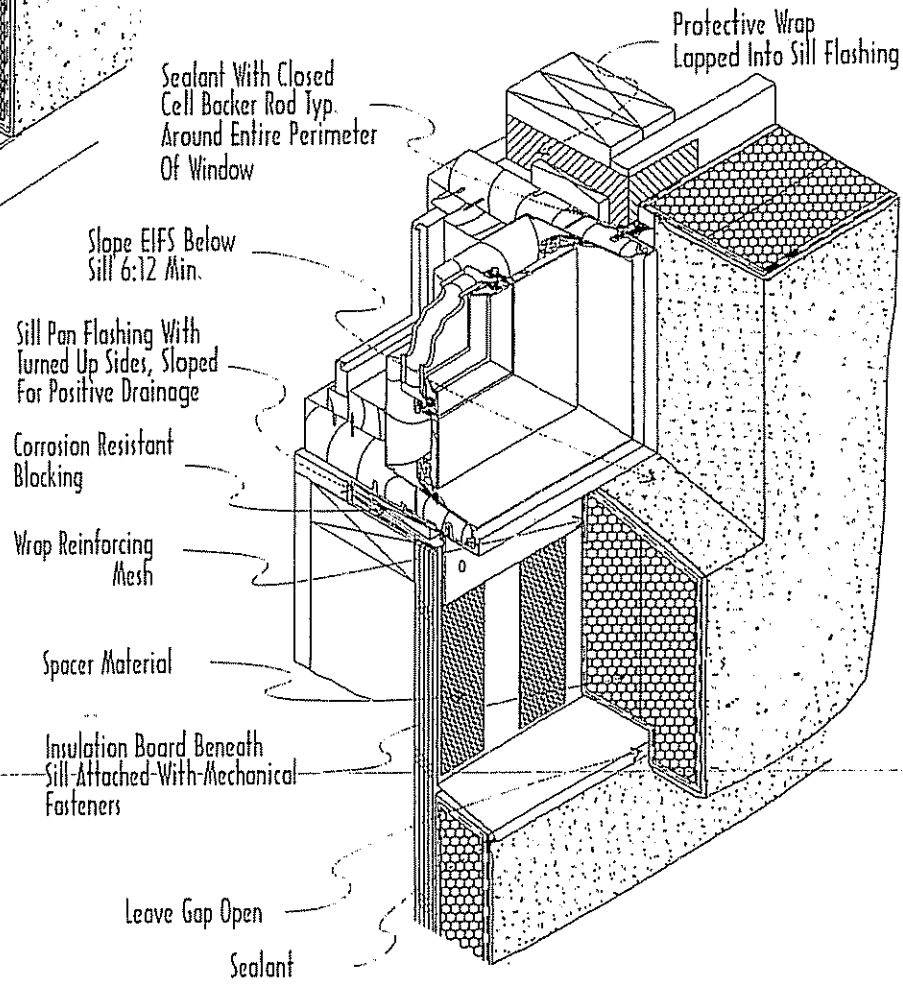

Fig. 2 WINDOW SILL AND JAMB

The purpose of a sill pan flashing is to catch water that may breach the window's barrier or pass beyond the sealant. The flashing should extend between the framing members of the rough opening and be sloped to allow water to drain to the outside of the EIFS. The spacer material should hold the nailing fin off of the sill pan extension by at least 1/8" (3 mm) to form drainage channels.

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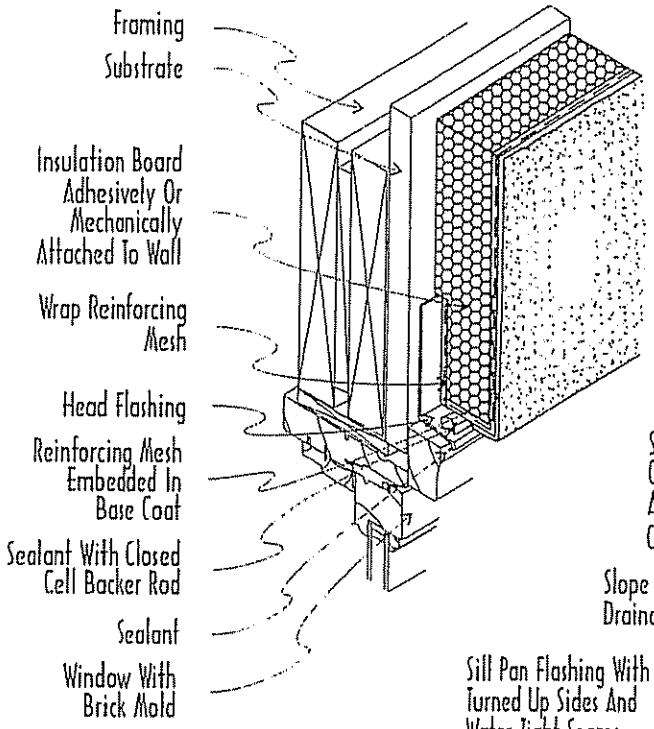
WINDOW - BRICK MOLD, CONCEALED SILL PAN



Refer to the window manufacturer's guidelines for specific installation requirements.

Fig. 1 WINDOW HEAD

Even with the use of head flashing, sealant is still required, as indicated, and serves to complement the flashing in establishing a water tight, continuous weather seal between the EIFS and the window frame.

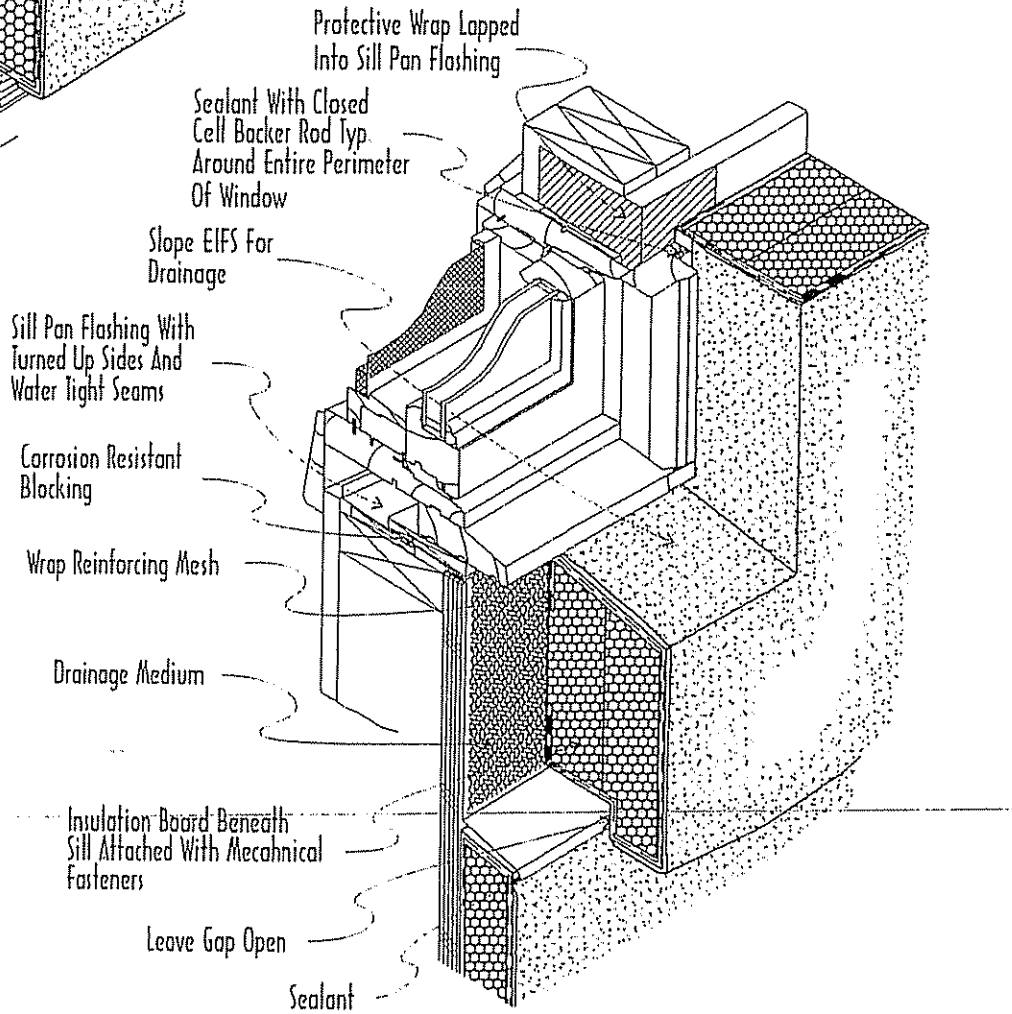


Fig. 2 WINDOW SILL AND JAMB

The purpose of a sill pan flashing is to catch water that may breach the window's barrier or pass beyond the sealant. The flashing should extend between the framing members of the rough opening and be sloped to allow water to drain to the outside of the EIFS. The drainage medium should hold the EPS insulation board off of the sill pan extension by at least 1/8" (3 mm). This detail depicts a concealed sill pan. However, this type of window may also be installed with an exposed sill pan as depicted in figure 2 of drawing 5.

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PLUMBING AND ELECTRICAL PENETRATIONS

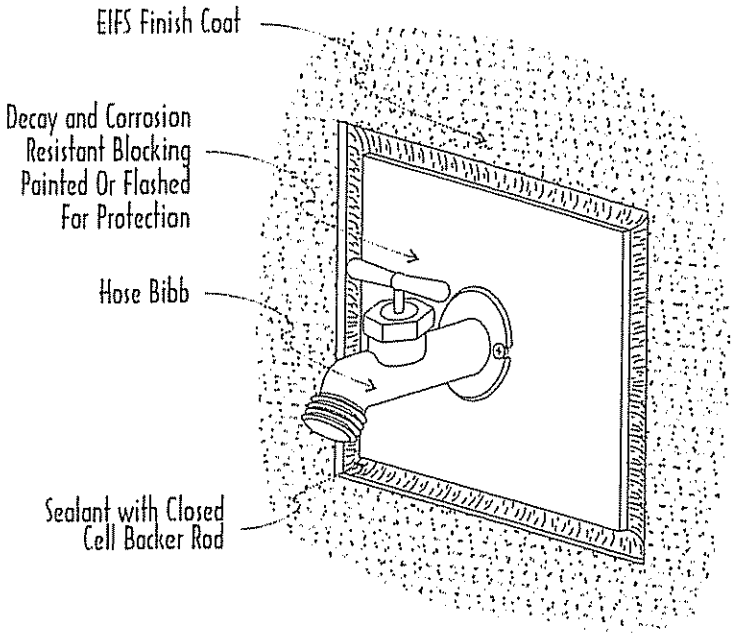

Fig. 1 HOSE BIBB ATTACHMENT

For accessories subjected to handling, such as hose bibs and railing supports, wood blocking offers protection to the EIFS while providing a base for rigid attachment. The wood blocking may be painted or encapsulated in flashing.

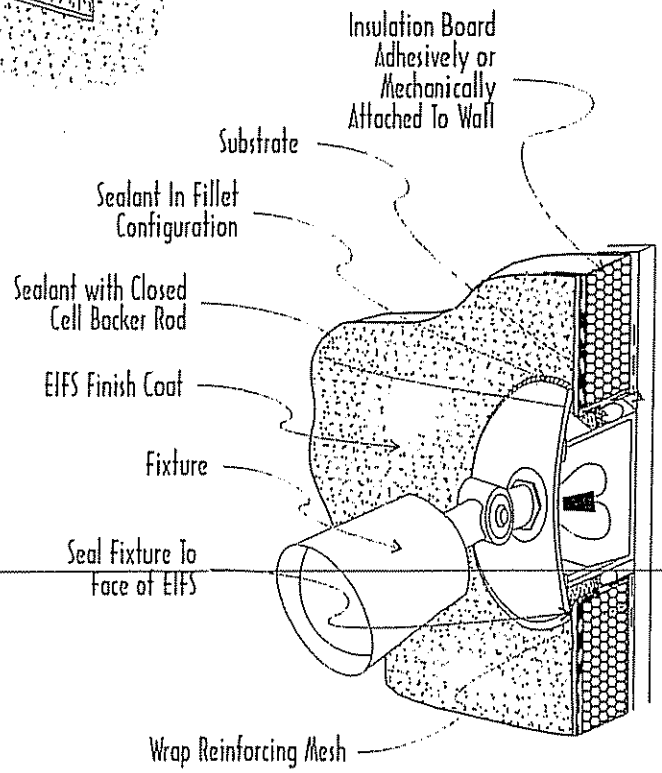

Fig. 2 ELECTRICAL ATTACHMENT

Electrical box installations, whether for light fixtures or outlets, may be shimmed back to the sheathing to allow for flush mounting of the electrical accessory.

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